

REMARKS

Applicants appreciate the Examiner's thorough examination of the application and fully respond herein to the issues presented.

The Examiner has allowed Claims 15, 17, and 18.

Applicants are amending Claim 1 to refer to the contraction of a hollow substrate tube into a massive rod.

The Examiner objects to Claim 9 and Claim 12 under 37 CFR § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a prior claim.

Applicants respectfully note that dependent Claim 9 relates to the contraction of the outer protective tube whereas step v) as recited in Claim 1 as amended relates to the contraction of the inner hollow substrate tube. As such, depending Claim 9 further defines the recitations of independent claim 1.

Applicants are canceling Claim 12.

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The Examiner rejects Claims 1–2, 4–5, and 7–14 as being anticipated by U.S. Patent No. 5,049,406 (Geittner *et al.*). The Examiner rejects Claims 3, 6, and 20 as being rendered obvious in view of the Geittner '406 patent, either alone or in combination with U.S. Patent No. 4,857,091 (Geittner *et al.*).

Applicants respectfully disagree and contend that the Geittner '406 patent in no way teaches or suggests the contraction process as presently recited in independent Claim 1.

For instance, Figures 1 and 2 in the Geittner '406 patent relate to a process for manufacturing clusters (*i.e.*, submicroscopic particles having diameters from approximately 10–100 nanometers). *See, e.g.*, U.S. Patent No. 5,049,406 at column 7, lines 10–65. To manufacture these clusters, Geittner employs a stationary microwave resonator 25, which creates a plasma that disintegrates a quartz tube 20.

The Examiner suggests that the Geittner '406 patent discloses a microwave resonator 25 that surrounds a protective tube (*e.g.*, Geittner's quartz tube 19), which itself surrounds a hollow substrate tube (*e.g.*, Geittner's quartz tube 20). The Geittner '406 patent, however, fails to teach reciprocating a resonator (*e.g.*, Geittner's microwave resonator 25) in a longitudinal direction with respect to a protective tube for the purpose of contracting a hollow substrate tube (*e.g.*, Geittner's quartz tube 20) into a massive rod. In fact, the Geittner '406 patent, which embraces the disintegration of a quartz tube 20, is utterly unrelated to the contraction of a hollow substrate tube to form a massive rod. Therefore, the Geittner '406 patent is an inapt reference under 35 U.S.C. §102.

Moreover, the Geittner '091 patent does not cure the deficiencies of the Geittner '406 patent. Like the Geittner '406 patent, the Geittner '091 patent fails to disclose the contraction process as presently recited in Claim 1 (*e.g.*, "reciprocating the resonator in a longitudinal direction with respect to the protective tube for the purpose of contracting the hollow substrate tube into a massive rod").

In view of the foregoing, Applicants respectfully contend that the cited Geittner patents neither anticipate nor render obvious independent Claim 1. It follows, therefore, that the Geittner patents do not render unpatentable the pending claims that depend upon independent Claim 1. Applicants ask that the Examiner kindly withdraw the rejections of Claims 1–11, 13, 14, and 20 as set forth under 35 U.S.C. §§ 102(b) and 103(a).

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Applicants are paying for a one-month extension by credit card. Although Applicants believe that no other fees are due with respect to this Amendment, the Examiner is hereby authorized to charge any additional fees (or credit any overpayment) to Deposit Account No. 50–0332.

CONCLUSION

In view of the foregoing, Applicants respectfully assert that Claims 1–11, 13, 14, 17–18, and 20 are in condition for immediate allowance and respectfully request that the Examiner pass these claims to issuance.

To the extent the Examiner believes there are unresolved issues, Applicants ask that the Examiner grant an interview with the undersigned attorney of record.

Respectfully submitted,

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